

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A method of manufacturing an electro line for a semiconductor device, comprising:
 - depositing a molybdenum (Mo) layer on a substrate;
 - depositing a copper layer (Cu) on the Mo layer;
 - forming a photoresist pattern on the Cu layer;
 - etching the Cu layer and the Mo layer using an etchant to form a Mo/Cu electro line,wherein the photoresist pattern is used as a patterning mask; and
 - removing Mo residue around the Mo/Cu electro line,
 - wherein removing the Mo residue around the Mo/Cu electro line includes oxidizing the Mo residue and removing the oxidized Mo residue, and
 - wherein oxidizing the Mo residue includes one of an O₂ ashing process, an Ultra Violet treating process and an O₂ annealing process.
2. (Canceled)
3. (Canceled)
4. (Currently Amended) The method according to claim [[2]] 1, wherein removing the oxidized Mo residue includes using one of stripper, deionized (DI) water, and dilute solution including hydrogen fluoride (HF).
5. (Currently Amended) The method according to claim [[2]] 1, wherein removing the oxidized Mo residue further includes removing the photoresist pattern.
6. (Original) The method according to claim 1, wherein removing the Mo residue around the Mo/Cu electro line is performed using ozone (O₃) water.
7. (Original) The method according to claim 1, wherein the etchant includes hydrogen peroxide (H₂O₂).

8. (Currently Amended) A method of manufacturing a liquid crystal display device including a Mo/Cu electro line, comprising:

forming a gate line and a gate electrode, including:

depositing a molybdenum (Mo) layer on a substrate;

depositing a copper layer (Cu) on the Mo layer;

forming a photoresist pattern on the Cu layer;

etching the Cu layer and the Mo layer using an etchant to form a Mo/Cu electro line,

wherein the photoresist pattern is used as a patterning mask; [[and]]

removing Mo residue around the Mo/Cu electro line;

forming a gate insulating layer on the gate line and the gate electrode;

forming a semiconductor layer on the gate insulating layer over the gate electrode;

forming a data line, a source electrode and a drain electrode on the semiconductor layer;

forming a passivation layer on the data line, the source electrode and the drain electrode;

and

forming a pixel electrode on the passivation layer,

wherein removing the Mo residue around the Mo/Cu electro line includes oxidizing the Mo residue and removing the oxidized Mo residue, and

wherein oxidizing the Mo residue includes one of an O₂ ashing process, an Ultra Violet treating process and an O₂ annealing process.

9. (Canceled)

10. (Canceled)

11. (Currently Amended) The method according to claim [[9]] 8, wherein removing the oxidized Mo residue includes using one of stripper, deionized (DI) water, and dilute solution including hydrogen fluoride (HF).

12. (Currently Amended) The method according to claim [[9]] 8, wherein removing the oxidized Mo residue further includes removing the photoresist pattern.

13. (Original) The method according to claim 8, wherein removing the Mo residue around the Mo/Cu electro line is performed using ozone (O_3) water.

14. (Original) The method according to claim 8, wherein the etchant includes hydrogen peroxide (H_2O_2).

15. (Original) The method according to claim 8, wherein forming a data line, a source electrode and a drain electrode on the semiconductor layer includes forming a Mo/Cu structure.

16. (Original) The method according to claim 15, wherein forming the Mo/Cu structure includes:

- depositing a molybdenum (Mo) layer on a substrate;
- depositing a copper layer (Cu) on the Mo layer;
- forming a photoresist pattern on the Cu layer;
- etching the Cu layer and the Mo layer using an etchant to form a Mo/Cu line, wherein the photoresist pattern is used as a patterning mask; and
- removing Mo residue around the Mo/Cu line.